Corridor Studies:
One Size Does Not Fit All

Presented by Kendra Schenk, PE, PTOE

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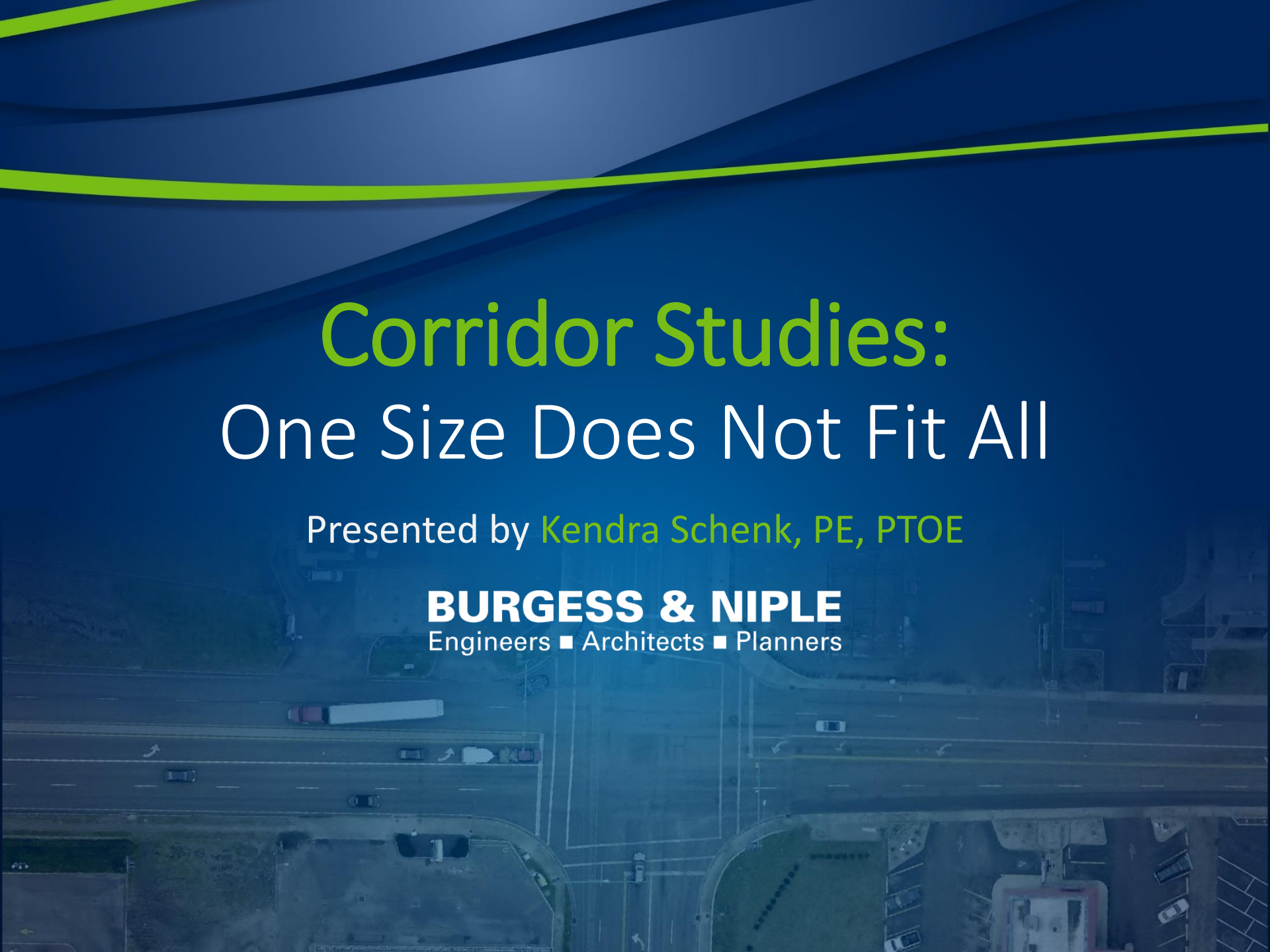

Presentation Overview

- Overview of Recently Completed/Ongoing Studies
- Differences between Corridor Studies
- Keys to Scoping Good Corridor Studies

Corridor Study Examples

WV 622 Corridor Study

- Cross Lanes, WV (Goff Mountain Road/Big Tyler Road)
- Affordable and constructible short- to medium-term solutions to congestion and multimodal system deficiencies in the corridor
- March 2016

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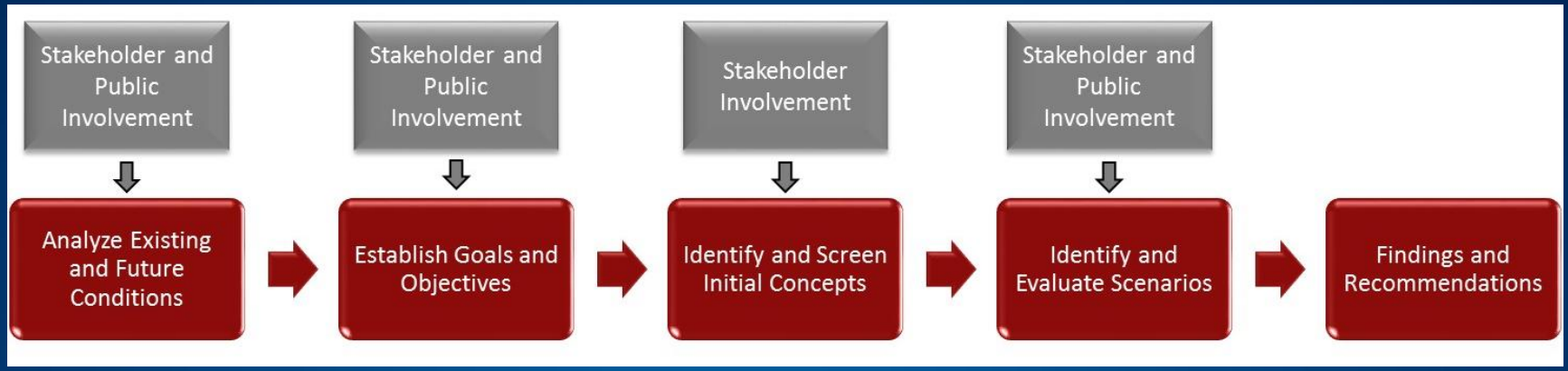
WV 622 Corridor Study

- Study Process
  - Identify Current Problems and Needs
  - Develop Goals and Objectives
  - Evaluate Improvement Scenarios
  - Issue Recommendations

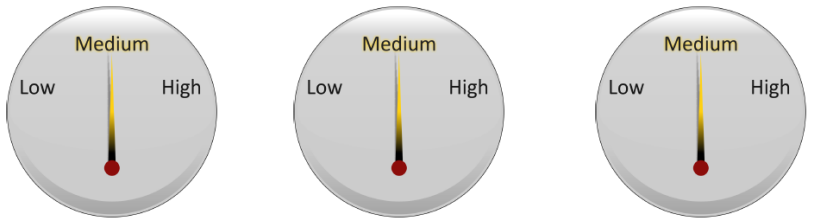


WV 622 Corridor Study

Goal	Evaluation	Importance*	Evaluation Criteria
Reduce traffic delay and loss of productive/personal time due to congestion		4.5	Provides preferred intersection levels of service (LOS) and has traffic queues that do not create blockages and other problems. Given the highly traveled and urban location for the intersections in this area, users expect to experience some delay at these intersections. Therefore, LOS D or better for all approaches at all six study intersections is preferred. LOS E on an approach or approaches, with an overall LOS D, would be considered acceptable for these intersections. **Significantly improves operations along the corridor. Only a few intersections approaches with LOS E. Approaches on WV 622 are all LOS D or better.**
Feasible and affordable solutions		3.6	Provides a solution that meets identifiable needs, has a benefit **that is in reasonable proportion** to the cost, adverse environmental impacts, and adverse impacts to adjacent properties and stakeholders. **Anticipated to cost in the $8 Million range plus right-of-way costs. Improvements that have significant impacts to properties: Adding the southbound right turn lane at the WV 622/62 intersection appears to require a partial take of a building. The addition of the northbound lane on WV 622 does not appear to directly impact any structures, but does have impacts to some driveways, parking, and potentially business operations. Widening to add the sidewalk north/east of Kroger will have some minor right-of-way impacts and could require some short retaining walls.**
Reduce the number of traffic crashes		3.6	Provides geometric improvements that have proven reductions in the number of crashes based on the *Highway Safety Manual* (i.e., added turn lanes, signalization, access control, roundabouts, etc.). **Improves roadway geometry at some higher crash intersections. Reduction in lane width should reduce traffic speeds in corridor. Does not address the crash problem related to the numerous driveways/left turns.**
Encourage growth in employment in the corridor/Cross Lanes area		3.4	Provides a broader market reach by reducing the travel time to businesses between Interstate 64 and Cross Lanes Drive/W. Washington Street (WV 62). **Provides a noticeable difference in travel time in the PM peak from I-64 to Cross Lanes Drive.**
Improve pedestrian access and connectivity to allow for reduction in automobile trips and to improve personal health and quality of life		3.4	Provides reasonably good conditions for pedestrians such as: good lighting, adequately wide sidewalk, lack of debris on sidewalk, ADA compliant pathways, and improved transit stops/shelters. **Provides basic pedestrian access for the entire length of the corridor. Provides improved crosswalks. Rating assumes that ADA issues will be resolved and maintenance of the existing sidewalks will be improved. The large number of driveways and side roads still creates delay and potential safety issues for pedestrians.**
Improve air quality through reduction in vehicle emissions		2.9	Provides decreased vehicle emissions over "do-nothing" conditions. **Fuel consumption (and thus emissions) is significantly reduced due to the decrease in delay and travel time.**
Improve bicycle access and connectivity to allow for a reduction in automobile trips and to improve personal health and quality of life		2.9	Provides reasonably good conditions for biking such as: a reasonably comfortable location for cyclists to ride, and lack of debris/mud in path of the cyclist. **Improvements in automobile capacity and operations will also benefit bicycle traffic.**
Improve aesthetics/visual quality of the corridor		2.3	Provides improved landscaping, uniform lighting, and better overall visual appeal along the corridor. **New construction of pavement and curbs and added sidewalk will have a temporary positive impact on aesthetics. No significant improvement otherwise.**
Encourage growth in population/residents in the corridor/Cross Lanes area		2.1	Provides acceptable tr… **…from north of the Kr…** …**eductions in travel times**

* Based on a Stakeholder Survey on the importance of each goal. The value represents the average scor…

SCENARIO A: WIDEN NORTHBOUND WV 622

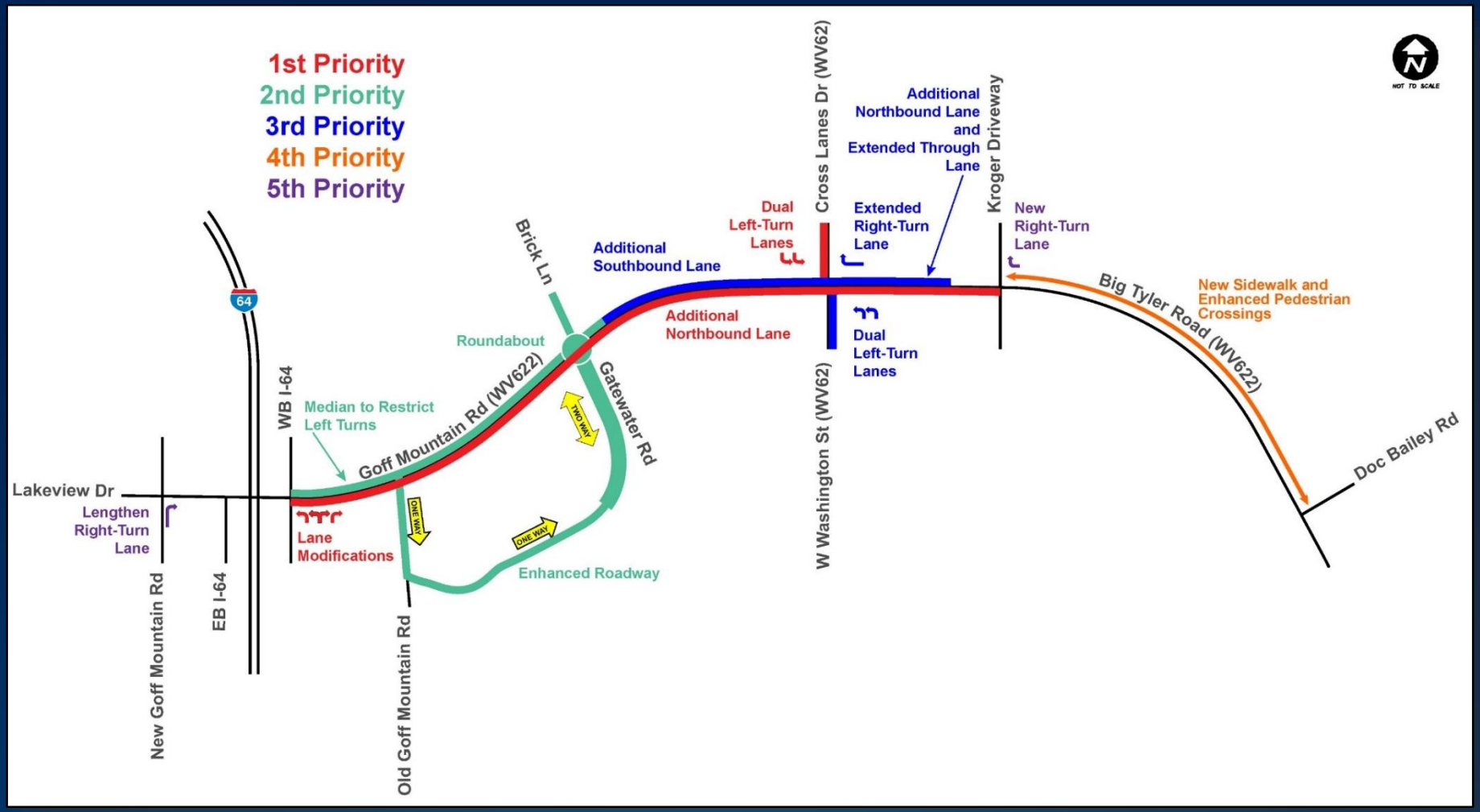


CONSTRUCTION COSTS

IMPACTS TO ADJACENT PROPERTIES
BUILDINGS, OPERATIONS, ACCESS

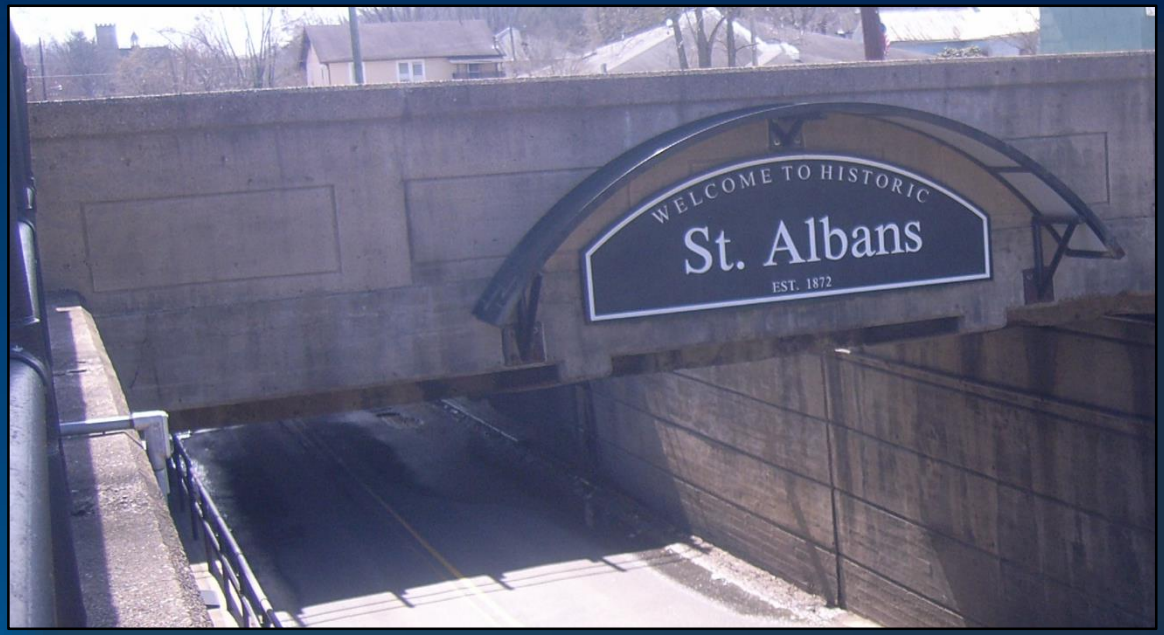
DIFFICULTY OF IMPLEMENTATION
BASED ON LIKELIHOOD THAT FUNDING, RIGHT-OF-WAY, AND ENVIRONMENTAL CLEARANCE COULD BE OBTAINED

WV 622 Corridor Study



Third Street Corridor Study

- St. Albans, WV
- Improve multimodal access to the core of St. Albans
- March 2016



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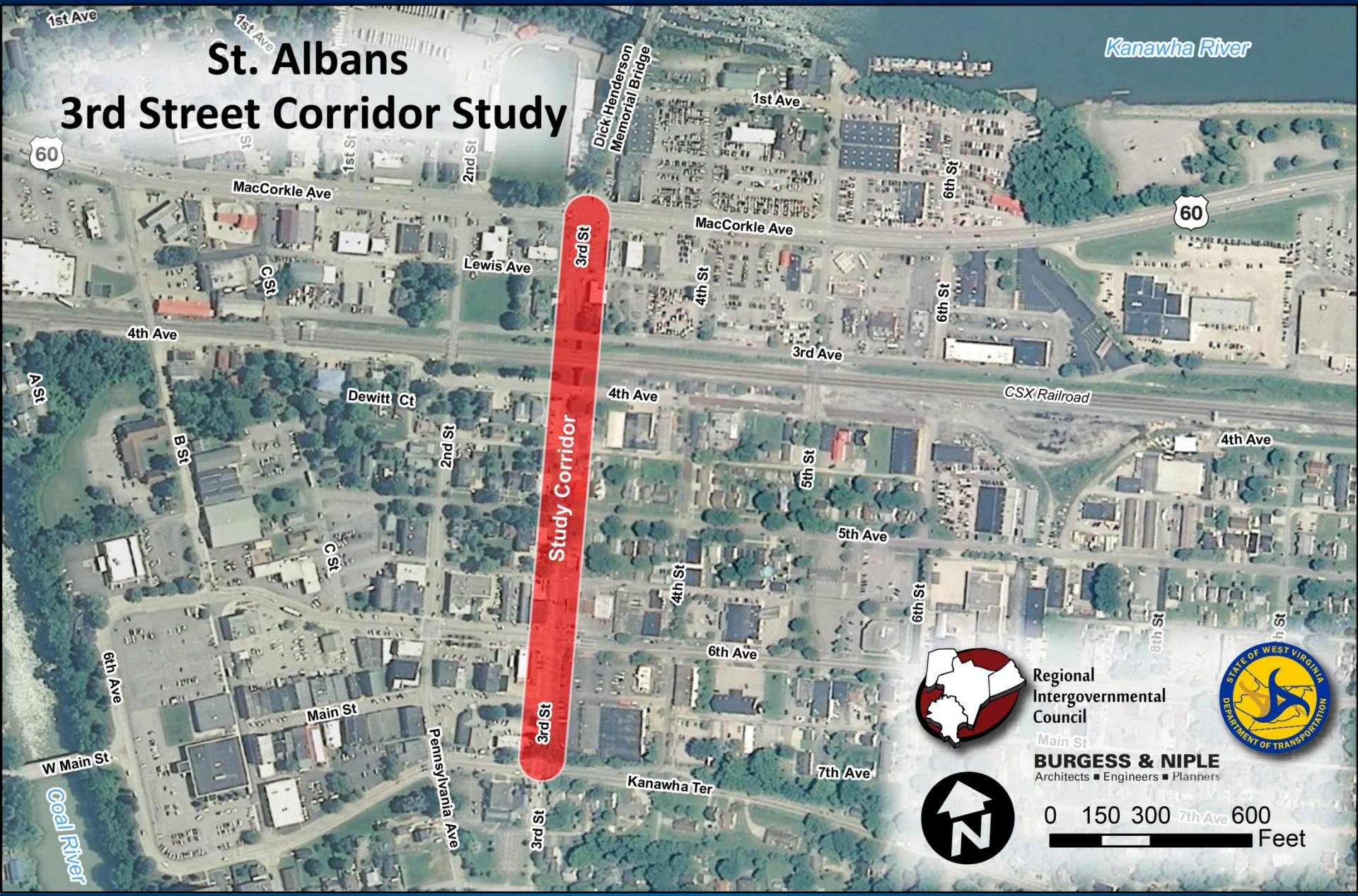
St. Albans
3rd Street Corridor Study
Kanawha River
Dick Henderson Memorial Bridge
Study Corridor
MacCorkle Ave
Lewis Ave
4th Ave
3rd Ave
CSX Railroad
5th Ave
6th Ave
7th Ave
Kanawha Ter
Main St
W Main St
Pennsylvania Ave
Coal River
1st Ave
2nd St
3rd St
4th St
5th St
6th St
A St
B St
C St
Dewitt Ct
60
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Feet

Third Street Corridor Study

Narrow Travel Lanes

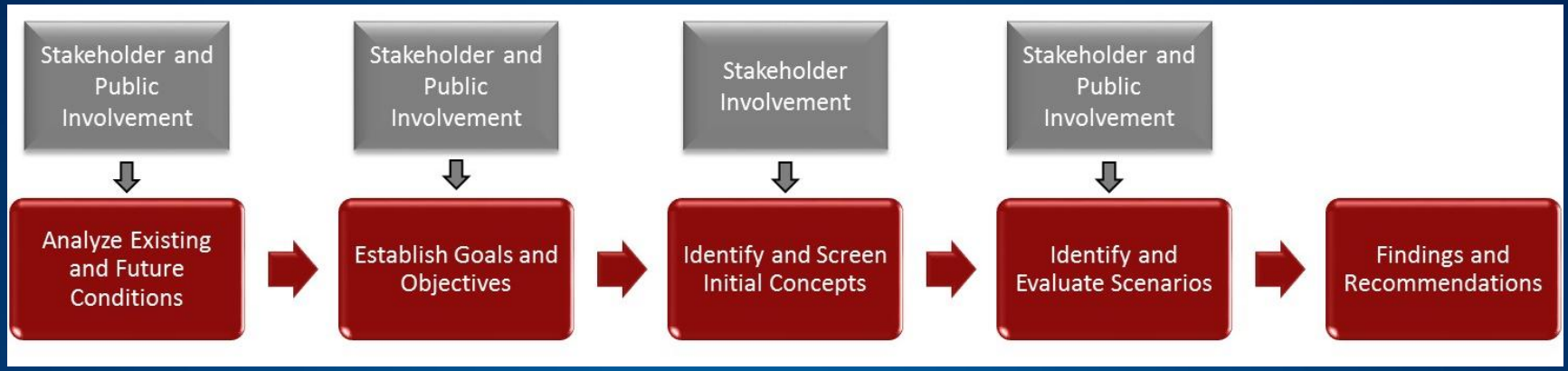
Lack of Vertical Clearance for Tall Vehicles


Lack of Clean/Adequate Pedestrian Accommodations

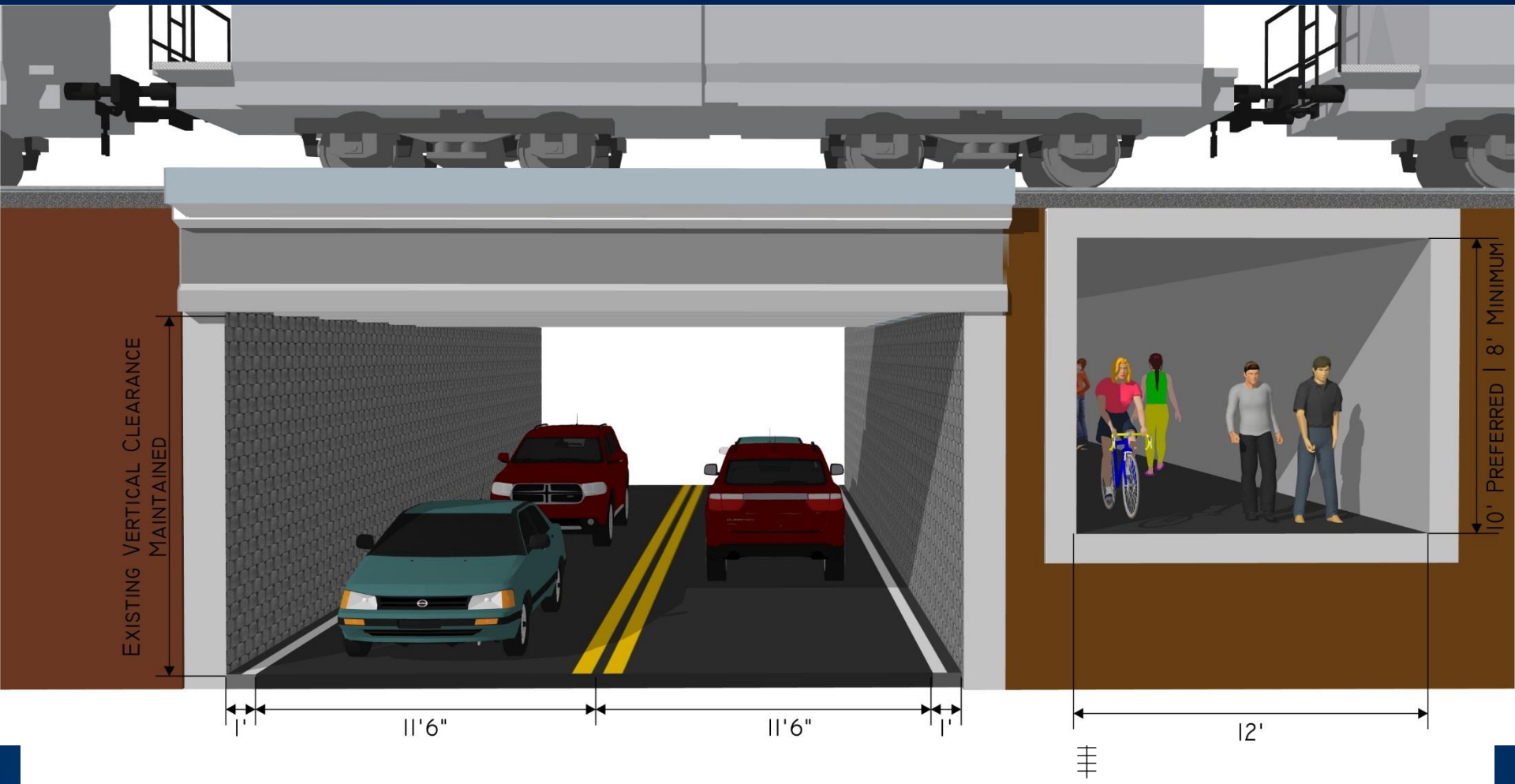

Congestion

Third Street Corridor Study

- Study Process
  - Identify Current Problems and Needs
  - Develop Goals and Objectives
  - Evaluate Improvement Scenarios
  - Issue Recommendations



Third Street Corridor Study



WV 14 Corridor Management Plan

- Parkersburg and Wood County, WV
- Land use and transportation strategies and policies to help better manage WV 14
- June 2016

www.triplew.org

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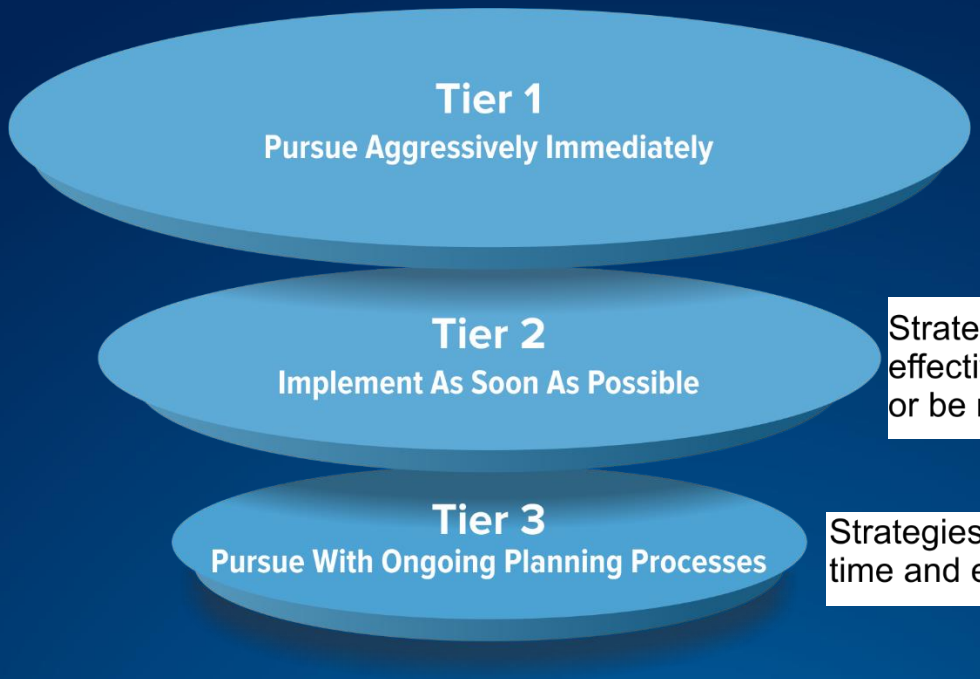
WV 14 Corridor Management Plan

- Study Process

WV 14 Corridor Management Plan

The WV 14 Corridor is ***attractive*** and ***safe*** for automobile, pedestrian, bicycle, and transit users. It has ***efficient traffic flow***; and ***good multimodal access and connectivity*** within the corridor, and to the region. It is a ***model*** for ***community focused*** and ***economically healthy*** corridors in the region.

WV 14 Corridor Management Plan



Strategies that would be very effective and have the greatest chance of near-term implementation.

Strategies that would likely be effective, but may take longer or be more difficult to implement.

Strategies that may take extensive time and effort to implement

WV 14 Corridor Management Plan

TIER 1 STRATEGIES	
T1-1	Signal timing optimization and system improvements
T1-2	Complete a Corridor Safety and Operational Improvements Study
T1-3	Improve geometry and traffic control at high crash intersections
T1-4	Construct intersection capacity improvement projects.
T1-5	Right-of-way preservation through site approvals / ROW dedication
T1-6	Adopt partial county zoning codes for the WV 14 corridor that allows for the regulation of site design, access management, and land uses
T1-7	Adopt a City of Parkersburg Zoning Overlay District to allow for additional control over land uses and access in the corridor
T1-8	Develop a multimodal transportation network plan for the corridor.
T1-9	Work to create funding sources outside of state/federal programs that can be used to make corridor improvements.

TIER 2 STRATEGIES	
T2-1	Encourage further annexation into the City of Parkersburg to take advantage of the City's existing zoning and SALDOs.
T2-2	Implement a sidewalk improvement and maintenance program.
T2-3	Widen longer sections of corridor to add more through lanes.
T2-4	Implement access management improvements
T2-5	Implement capital projects to improve the streetscape design.

TIER 3 STRATEGIES	
T3-1	Right-of-way preservation through purchase of property.
T3-2	Develop and maintain a corridor "way-finding" signage system.
T3-3	Develop and adopt City and County-wide design standards.
T3-4	Revise City and County subdivision regulations (SALDOs)
T3-5	Implement an "Access Point Reduction Program"
T3-6	Strengthen the WVDOH access control requirements and penalties for not complying.
T3-7	Update Comprehensive Plans for Parkersburg and Wood County to include mixed use and other more sustainable development recommendations in the corridor.
T3-8	Adopt strong access management codes in local land use regulations.

WV 14 Corridor Management Plan

TIER 1 STRATEGIES – IMPLEMENTATION PLAN				
Strategy		**Responsible Agency(ies) and Person(s)**	**Timeline**	**Next Actions**
T1-1	Signal timing optimization and system improvements	WWW Tracy Higgins WVDOH David Burris, District 3	Fall 2016	▪ Coordinate with WVDOH Traffic Engineering Division to prepare a detailed traffic signal system study for the corridor. The study can use the counts performed and Synchro model developed as part of this Corridor Management Plan (See Appendices C and E, respectively.) The study must include a detailed inventory of existing signal equipment and an equipment upgrade plan to allow for signal optimization that would include improved controllers, communications, and vehicle detection. ▪ Amend the TIP to include the signal upgrade costs.
T1-2	Complete a Corridor Safety and Operational Improvements Study	WWW Randy Durst WVDOH Brian Carr	2016-2017	▪ WWW to initiate with WVDOH a study to determine the preferred geometric and traffic capacity solutions for the corridor.

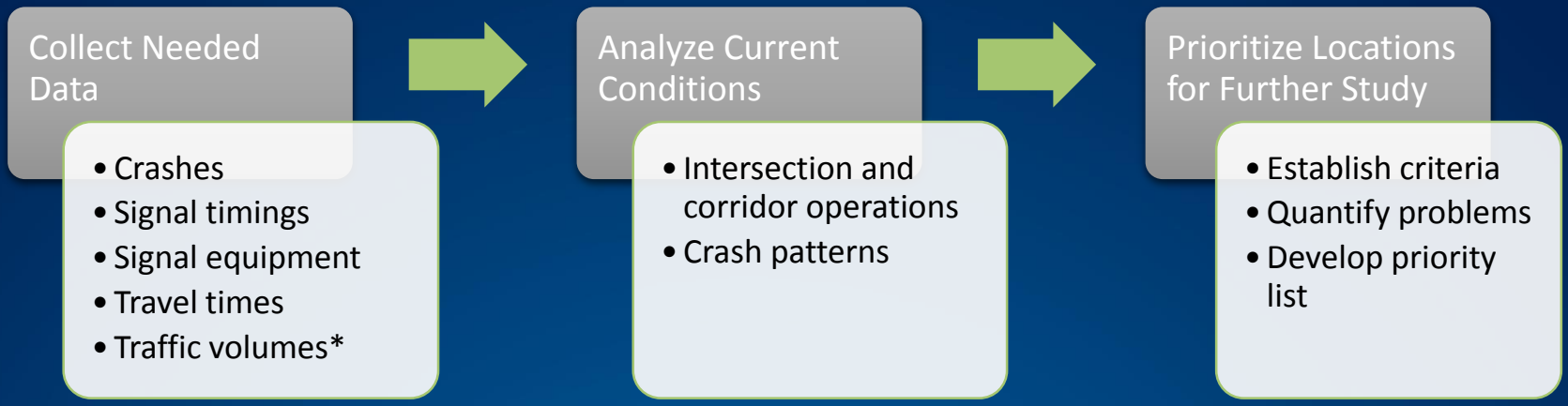
Corridor Review Prioritization

- Beckley and Raleigh County, WV
- Define and quantify current problems and deficiencies in four key regional corridors, so that the corridors (or sections of the corridors) can be smartly prioritized for more detailed improvement studies in coming fiscal years
- Ongoing/Expected Completion October 2016

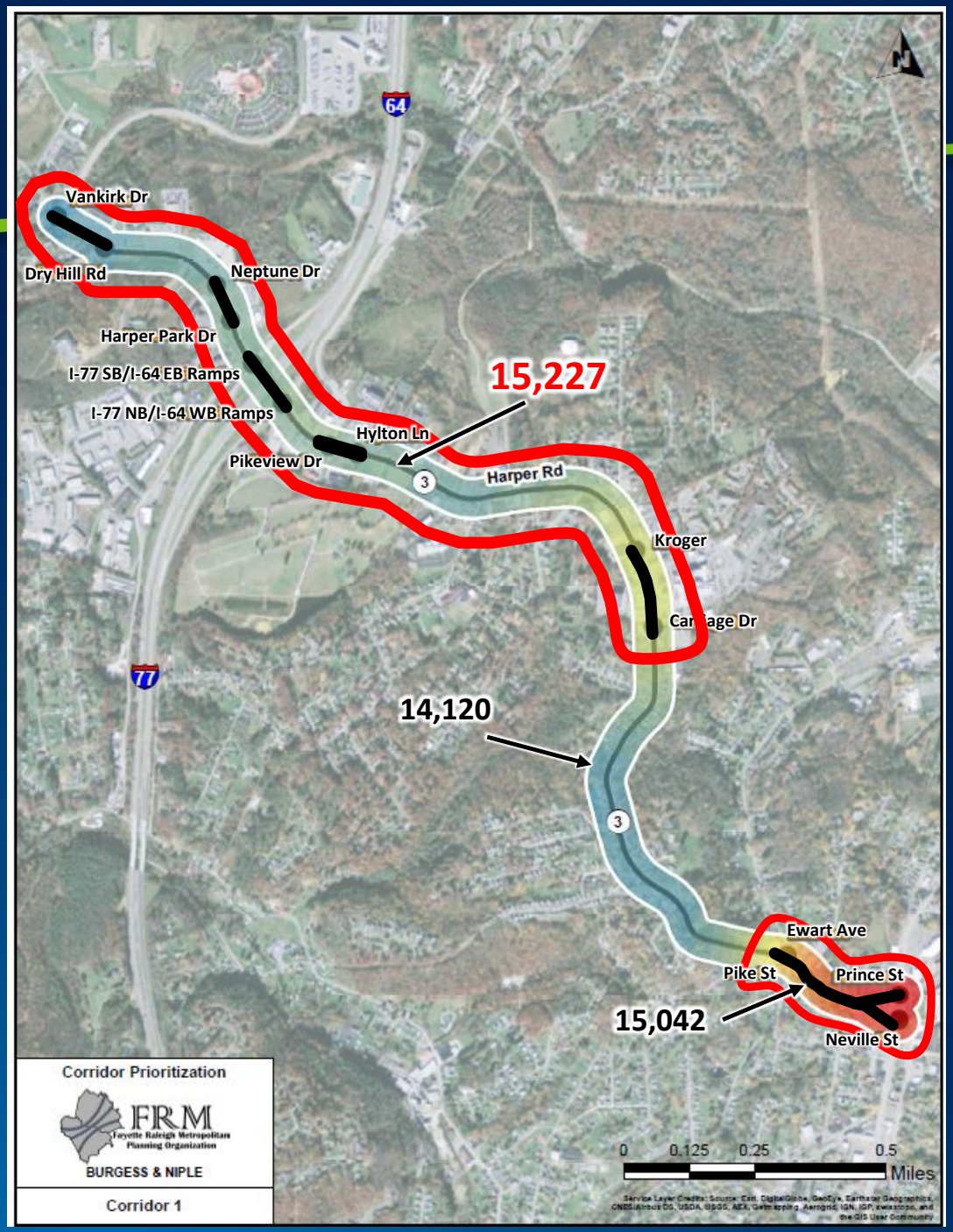
FRM
Fayette Raleigh Metropolitan Planning Organization

Corridor Review Prioritization

- Study Process



Corridor Review Prioritization



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Corridor Review Prioritization

- Next Steps
  - Identify locations for counting
  - Prioritize sections of corridor for future study

Differences Between Studies

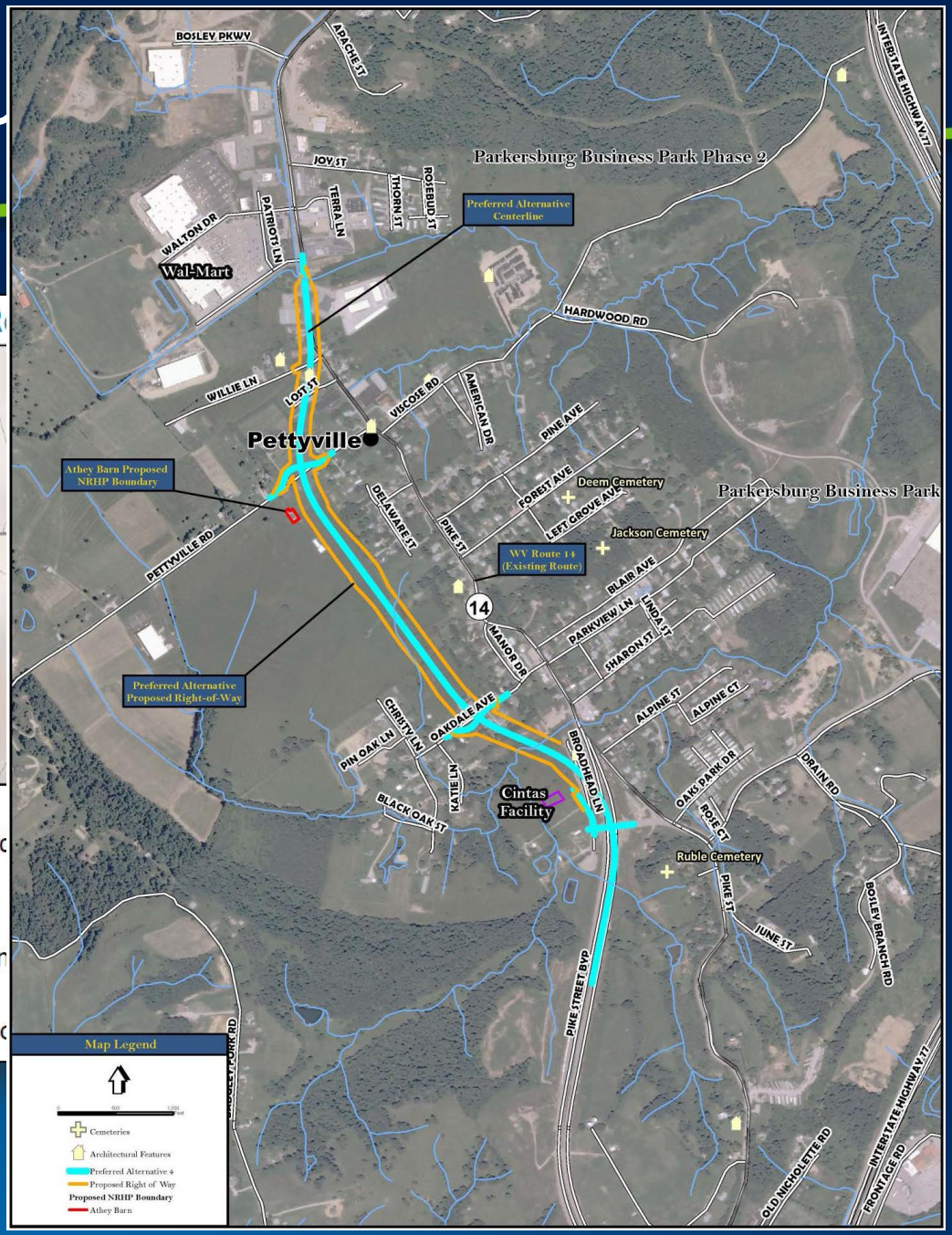
Reasons for the Stu

- KC-2: WV 622 and WV 62 (Big Tyler R

Existing Facility: Minor Arterial – 3 lanes, undivic

Average Daily Traffic: 2010: 18,240
2040: 20,240 (11.0% in

Description: This project improves the intersectio

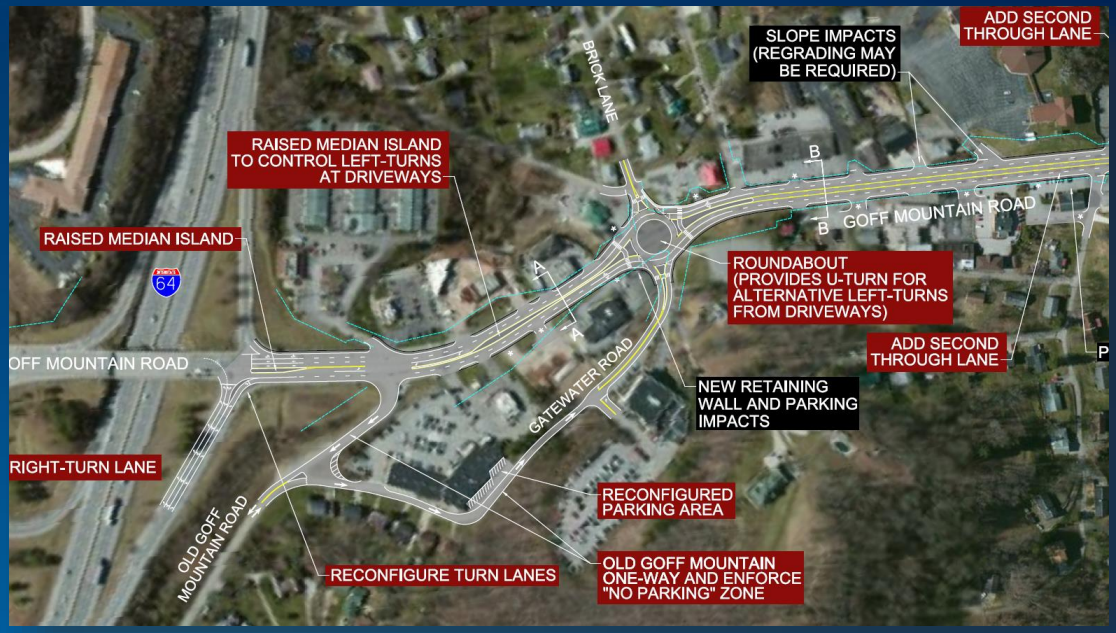


Recommendations from Study

- Safety improvements
- Capacity improvements
- Community enhancements
- Implementable policies
- Priorities for future studies

Recommendations from the Study

- WV 622 Corridor Study & Third Street Corridor Study
  - Specific Capacity and Safety Improvements
  - “Shovel-Ready Projects” (Preliminary Engineering)
  - Medium-Term and Short-Term Improvements
  - Low-to-Medium Costs



Recommendations from the Study

- WV 14 Corridor Management Plan
  - Policies and Strategies
  - No Specific Geometric Improvements
- Corridor Review Prioritization
  - Locations and Priorities for Future Studies
  - No Specific Recommendations for Improvements

Defined “Success”

- How would success be defined?
  - By the sponsoring agency
  - By key stakeholders
  - By residents

Defined “Success”

- WV 622 Corridor Study Goals and Objectives
  1. Reduce traffic delay
  2. Feasible and affordable solutions
  3. Reduce the number of crashes

- Third Street Corridor Study Goals and Objectives
  1. Feasible and affordable solutions
  2. Minimal disruption to CSX during construction
  3. Improved vertical and horizontal clearance

Defined “Success”

- WV 14 Corridor Management Plan
  - Buy-in from all stakeholders
  - Provide a tool to help in local government decision making process
  - Alternative transportation must be considered (bike, walk, transit)
  - Better planned access points (shopping centers, other major drives)
  - Preserve and protect public transportation investment
  - Swift implementation after the completion of the plan

Budget for Study

- What is the budget for the completion of the study?
  - More budget
    - More detailed recommendations
    - More stakeholder coordination
    - More in-depth analysis
  - Budget should align with goals of study and types of recommendations desired

Budget for Study

- WV 622 Corridor Study
  - ~ $100,000
- Third Street Corridor Study
  - ~ $100,000
- WV 14 Corridor Management Plan
  - ~ $185,000
- Corridor Review Prioritization
  - ~ $75,000

Level of Stakeholder and Public Involvement

- Which key stakeholders should be involved?
- How should they be involved?
- Should the public be engaged?

Level of Stakeholder and Public Involvement

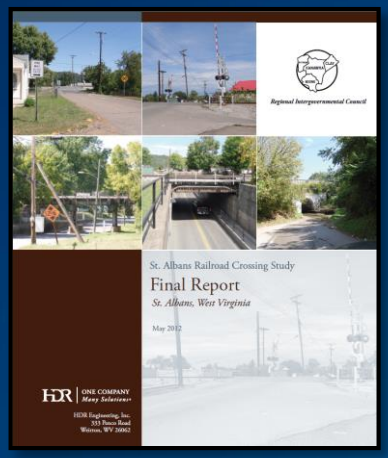
- WV 622 Corridor Study
  - Steering Group
    - Stakeholders that will have the greatest influence on the implementation of recommended improvements
    - Met 3 times over the course of the project
  - Stakeholder Interviews
    - Key stakeholders that could provide input on current issues and concerns and provide ideas for improvement
    - Opportunity to talk to agencies with members on the Steering Group about their specific concerns and ideas

Level of Stakeholder and Public Involvement

- WV 622 Corridor Study
  - Public Involvement
    - 2 Public Meetings
      - 1st Meeting – Held at the onset of the project for citizens to voice concerns about the corridor - *"A problem well defined is half solved"*
      - 2nd Meeting – Held towards the end of the project to present improvement options for public feedback

Level of Stakeholder and Public Involvement

- Third Street Corridor Study
  - Steering Group
  - Stakeholder Interviews
  - Public Involvement
    - 1 public meeting to present improvement options for public feedback



Level of Stakeholder and Public Involvement

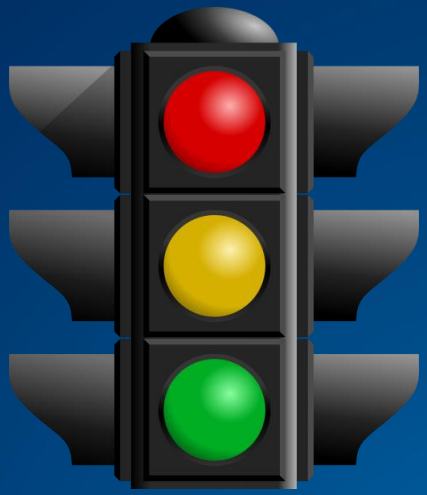
- WV 14 Corridor Management Plan
  - Steering Committee
  - Advisory Committee
    - More diverse group of stakeholders representing land owners, developers, realtors, business owners and operators
  - Stakeholder Interviews
  - Public Workshops

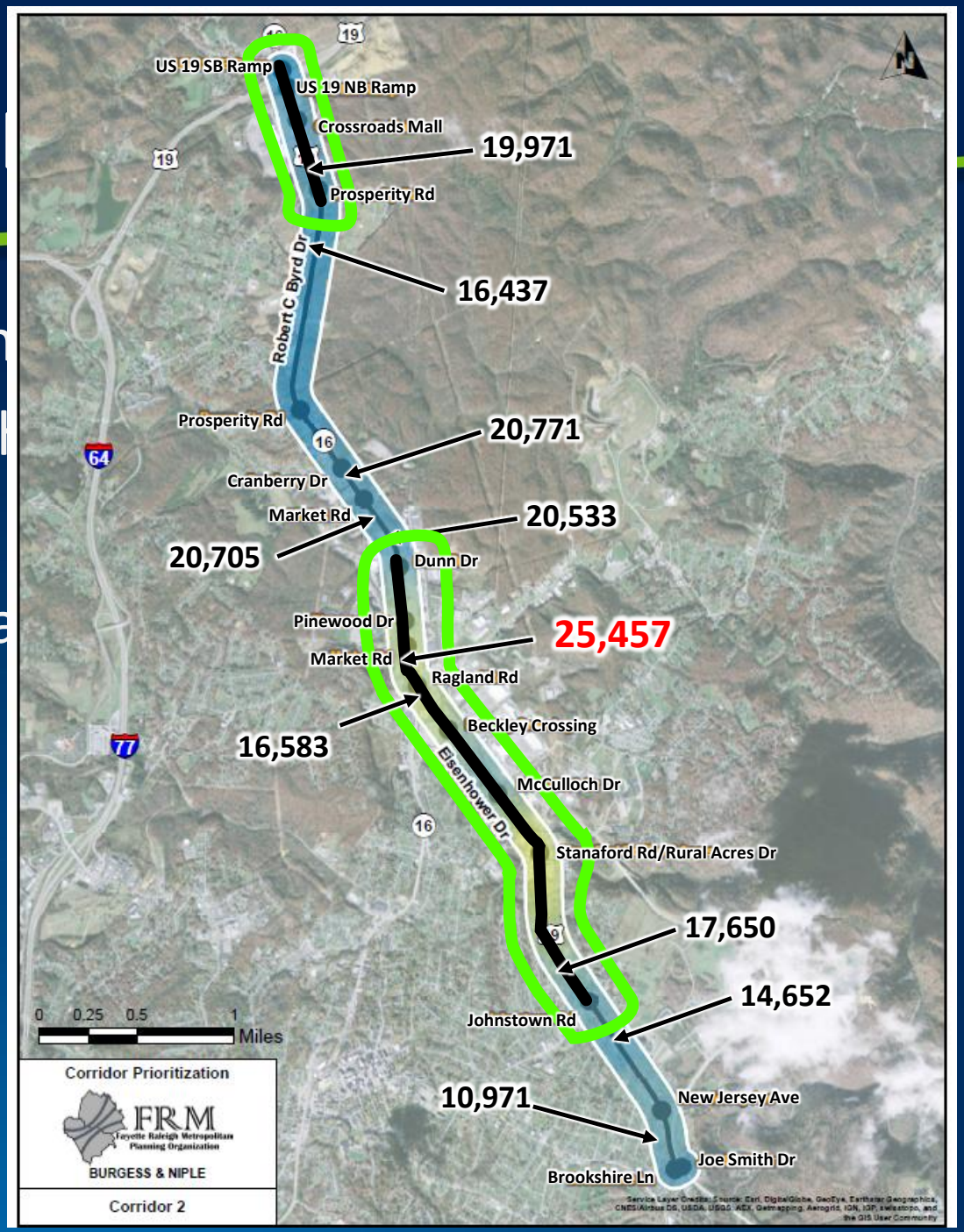
Level of Stakeholder and Public Involvement

- Corridor Review Prioritization
  - Stakeholder Group

Timeframe for Imp

- Near-term (within th
- Short-term (within t
- Medium-term (5-10
- Long-term (more tha





Timeframe for Improvements

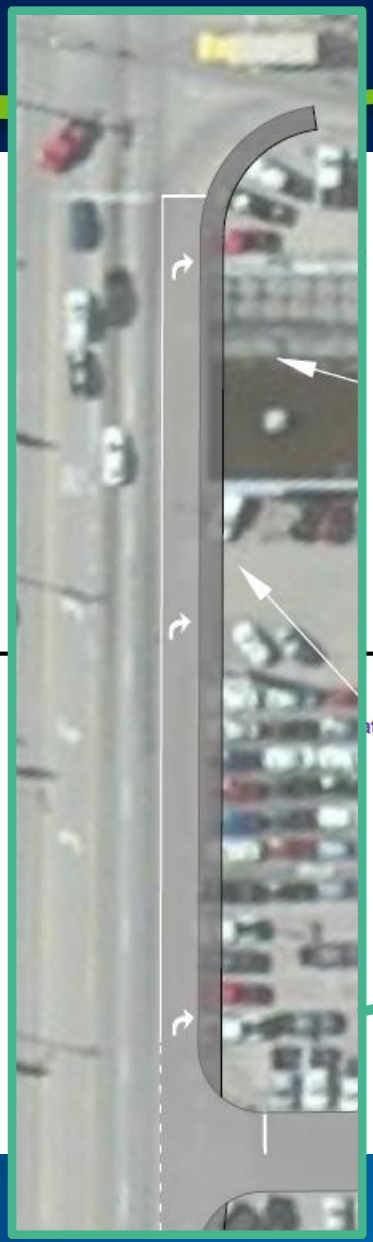
Short-Term

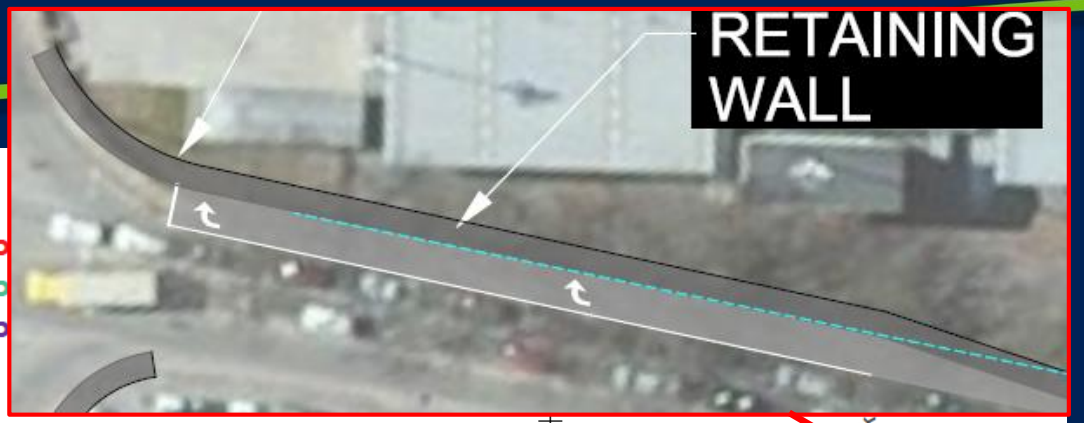
- Roadway Widening
- Modified Underpass
- Zoning Overlay
- Within R/W, Low Cost

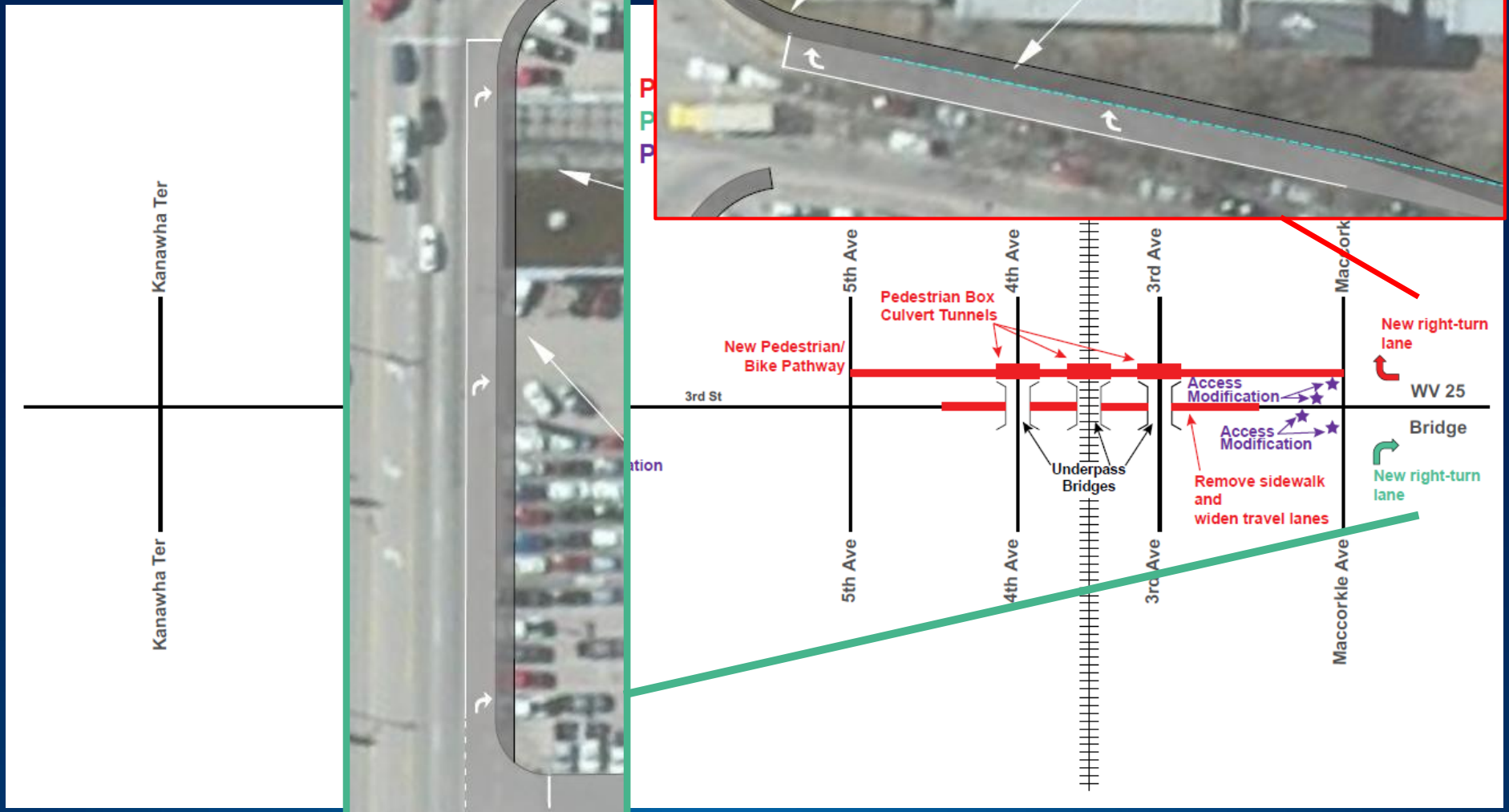
Long-Term

- Bypass
- New Underpass
- County-wide Zoning
- Additional R/W, Building Takes

Timeframe for Improvements

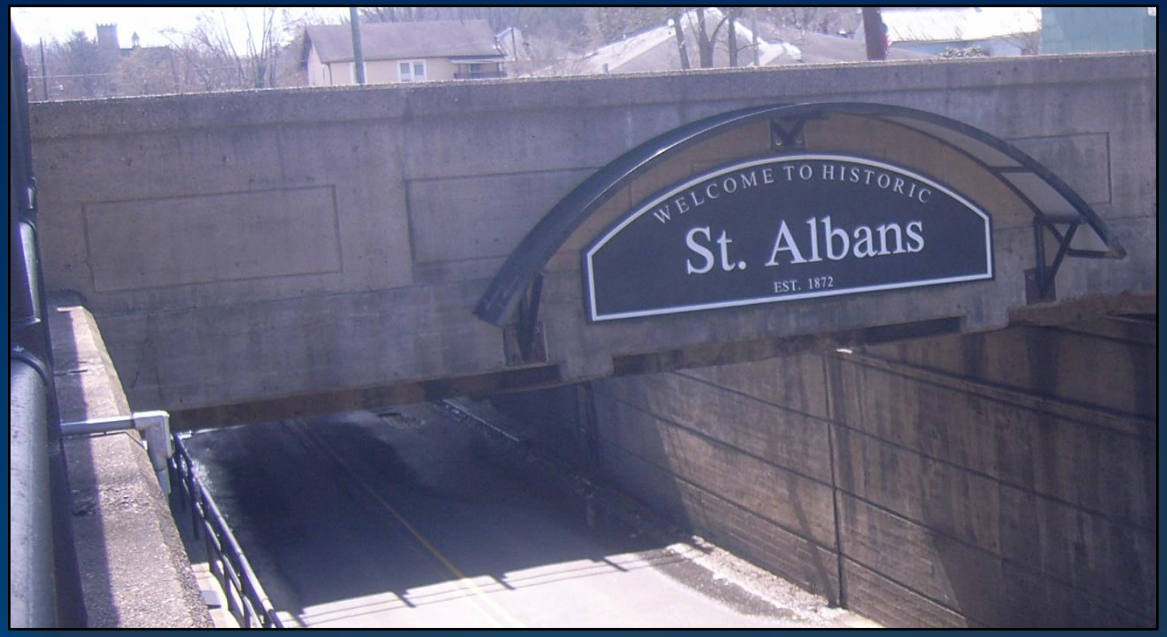






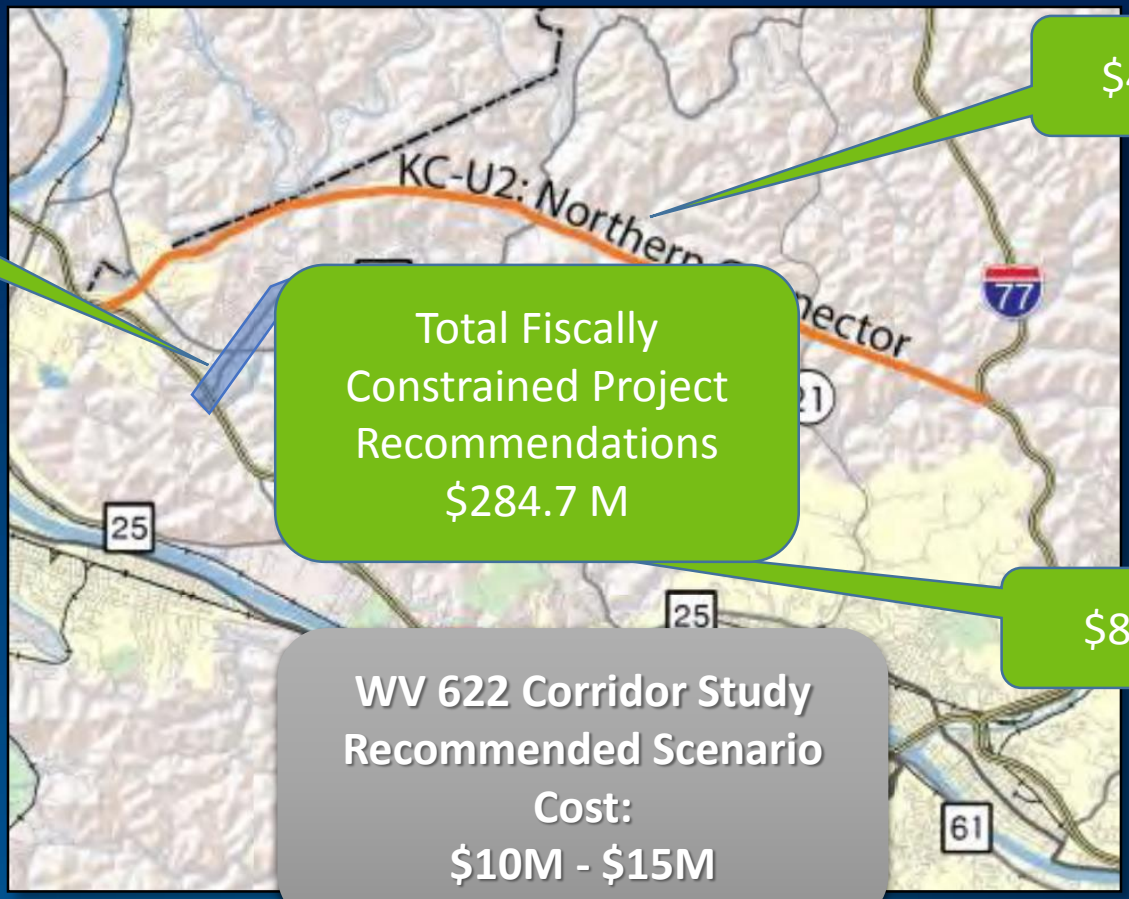
Funding Partners / Funding Solutions

- How will the improvements be funded?



Cost of Improvements

- What's a realistically affordable solution?



WV 622 Project

$433.4 M

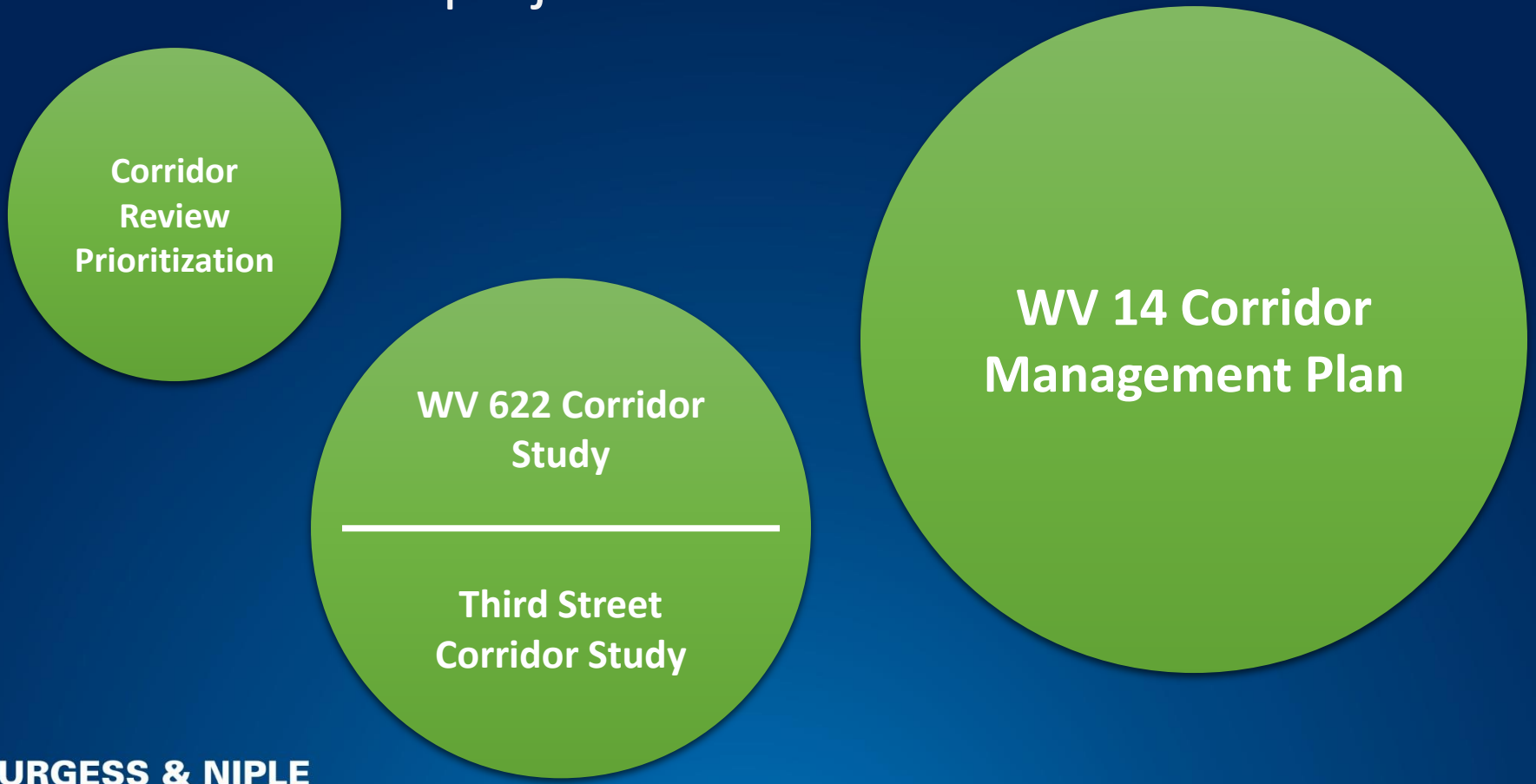
Total Fiscally Constrained Project Recommendations $284.7 M

$87.4 M

WV 622 Corridor Study Recommended Scenario Cost: $10M - $15M

Stakeholder Consensus

- What level of stakeholder consensus is required for a successful project?



Keys to Scoping Good Corridor Studies

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Keys to Scoping Good Corridor Studies

- Understand (*and make sure your consultant understands*) the origin of this project
- Identify key stakeholders who need to be involved
- Determine how stakeholders will be involved
- Clearly define goals and measures of success
- Decide what is reasonably affordable for solutions
- Identify potential funding sources
- Determine level of stakeholder consensus required and identify any issues that may occur during the study process

Corridor Studies

- One size does not fit all
- The key to a good corridor study is in the scope
  - Well-defined process
  - Clear expectations
  - Attainable goals and objectives

Questions?

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